DOCUMENT RESUME

ED 337 911 EA 023 442

AUTHOR Thompson, David C.; And Others
TITLE Fiscal Equity in Kansas under the School District Equalization Act: Consultants' Analysis on Behalf of Turner USD 202 in Mock v State of Kansas.
INSTITUTION University Council for Educational Administration, Manhattan, KS. Center for Education Finance.
PUB DATE Sep 91
NOTE 38p.; Addendum to ED 326 932.
PUB TYPE Legal/Legislative/Regulatory Materials (090) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Court Litigation; *Educational Equity (Finance); Elementary Secondary Education; *Equalization Aid; Expenditure per Student; Finance Reform; *Fiscal Capacity; *Resource Allocation; School District Spending; *State Courts; Tax Effort
IDENTIFIERS *Kansas

ABSTRACT

Updated information is provided in this addendum to an original report that assessed the equity of the Kansas School District Equalization Act (SDEA) from 1973 to 1988. This consultants' analysis on behalf of Turner School District in "Mock v. State of Kansas" consists of five parts. Following an introduction, section 2 reviews the initial conceptual framing of the original report in the context of the present action. The third section describes the operational framework used to evaluate the SDEA, and section 4 summarizes the results and conclusions of the original analysis. Findings of the addendum are presented in the fifth section, which are effectively identical to those of the first report: the plaintiff district holds less wealth; exerts a higher tax effort; receives less revenue due to the SDEA's definition of educational needs; holds disadvantaged demographics; and educates fewer children on a lower per-pupil budget. Fifteen tables are included. (3 references) (LMI)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

ED337911

# Fiscal Equity in Kansas Under the School District Equalization Act: Consultants' Analysis on Behalf of Turner USD 202 in Mock v State of Kansas

## ADDENDUM

Dr. David C. Thompson
Dr. David S. Honeyman
Dr. R. Craig Wood

UCEA CENTER FOR EDUCATION FINANCE
A Collaborative Venture of
Kansas State University
and
The University of Florida

314 Bluemont Hall
Kansas State University
Manhattan, KS 66506

September 1991

BEST COPY AVAILABLE



U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN **OTHER THAN PAPER COPY** HAS BEEN GRANTED BY

D. Thompson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EA 023 442

# CALL FOR PAPERS AND PROPOSALS

The UCEA Center for Education Finance is issuing a call for research proposals and completed works. The Center's mission seeks to comprehensively address the scope of education finance, to consider the effects of resources on teaching and learning, and to focus on policy implications and implementation. Proposals from diverse perspectives and disciplines are encouraged.

Contributions are sought by four methods:

1. Special invitations to submit unpublished work.
2. Responses to calls for proposals.
3. Submission of unpublished manuscripts for blind review.
4. Copies of dissertations, technical papers, and other such research for inclusion in the Center's clearinghouse.

Interested persons should submit three copies of completed papers or proposals to:

DAVID C. THOMPSON
UCEA Center for Education Finance
314 Bluemont Hall
Kansas State University

# Fiscal Equity in Kansas Under the School District Equalization Act: Consultants' Analysis on Behalf of Turner USD 202 in Mock v State of Kansas

# ADDENDUM

Dr. David C. Thompson
Dr. David S. Honeyman
Dr. R. Craig Wood

UCEA CENTER FOR EDUCATION FINANCE
A Collaborative Venture of
Kansas State University
and
The University of Florida

314 Bluemont Hall
Manhattan, KS 66506

September 1991

TABLE OF CONTENTS

I. Introduction..... 3

II. Initial Conceptual Framing..... 4

III. Operational Framework..... 6

IV. Results of the Original Analysis..... 7

Resource Accessibility..... 8

Wealth Neutrality and Taxpayer Equity..... 9

Real World Effects..... 10

V. Results of the Addendum..... 11

Resource Accessibility..... 11

Wealth Neutrality and Taxpayer Equity..... 13

Real World Effects..... 14

VI. Conclusions..... 16

VII. Endnotes..... 17

VIII. Tables..... 18

# FISCAL EQUITY IN KANSAS UNDER THE SCHOOL DISTRICT EQUALIZATION ACT: CONSULTANTS' ANALYSIS ON BEHALF OF TURNER USD 202 IN MOCK v. STATE OF KANSAS

## ADDENDUM

### INTRODUCTION

In July 1990, Turner Unified School District 202 in Wyandotte County, Kansas, through its attorney requested consultant assistance in evaluating the school finance formula in its action against the state. The principal investigator, Dr. David C. Thompson and co-investigator Dr. David S. Honeyman, designed and conducted the report in consultation with Dr. R. Craig Wood. The result was a report delivered to attorneys and plaintiffs entitled ***Fiscal Equity in Kansas Under the School District Equalization Act: Consultants' Analysis on Behalf of Turner USD 202 in Mock v State of Kansas*** that assessed the Kansas School District Equalization Act (SDEA) from 1973-1988.

Because of delays and postponements in depositions and trial dates that caused some dispute among parties regarding whether the analysis would hold true given such an extended lapse of time, representatives of Turner Unified School District 202 requested additional consultant analysis which would extend the range of data assessment to include whenever possible the years 1989-90 and 1990-91. The results of that assessment are contained in this addendum to the original report.

This addendum is subject to the general privileges and limitations stated in the original report. Specifically, it is again observed that the contents of this analysis are the independent impressions and scholarly opinions of the authors and imply or express only the position of those persons and the firm of *Wood, Thompson & Honeyman, Associates.* It is clearly stated that this analysis may not be construed to reflect official or unofficial positions of any other organization with which the authors are affiliated, including Kansas State University, the University of Florida, the UCEA Center for Education Finance, the University Council for Educational Administration (UCEA) or its member institutions, or any other public or private agency. This analysis is further limited to the scope and accuracy of documents and other written, oral, or electronic communication provided by the Kansas State Department of Education and the Turner USD 202 Board of Education and its representatives. Finally, this analysis is not intended to provide an exhaustive dissection of the Kansas School District Equalization Act in that it is limited to the particular issues believed to be most appropriate to Turner's lawsuit.

Under the above conditions, this addendum to the original study of August 1990 consists of five parts. First, we review the initial conceptual framing of the first report in the context of the present action. Second, we review the operational framework used in evaluating the SDEA. Third, the results and conclusions of the original analysis are summarized. Fourth, we provide a summary of the extended data analysis resulting from our review in this addendum. Fifth and finally, we briefly revisit our conclusions regarding the effect of the SDEA and enrollment categories on fiscal equity in the State of Kansas.

## INITIAL CONCEPTUAL FRAMING

Over the past forty years, more than a hundred challenges to school finance mechanisms have been brought in state and federal courts.[1] In a battle over equal educational opportunity popularly typified by Brown v. Board of Education,[2] few states have escaped litigation as reformers have sought greater equity in the funding of schools on the presumption that fiscal resources have a marked impact on the outcomes of schooling. Beliefs about the effect of resources on educational outcomes have been so intense that reformers have argued fervently that equality of educational opportunity must also encompass fiscal equality in order to be complete, and that the failure to fully equalize fiscal resources is to make a mockery of the equal opportunity mandate.[3]

These arguments have made a coherent and persuasive case in many states for including education among the fundamental constitutional rights deserving the full and equal protection of the laws in order to effectuate the equality mandate. The issues are particularly germane to this present lawsuit because they are precisely the issues under which Turner Unified School District 202 is seeking to require changes in how schools are financed in the State of Kansas. Specifically, the Turner school district has called into question the operation of the SDEA, both as it functions under the principle of equalization and through the operation and effect of enrollment categories which are said to adjust for certain attributable costs of education. From Turner's perspective, the question rests in whether the principle of equalized educational opportunity is uniformly operational, and whether equalization can genuinely be served when the only differential costs recognized by the SDEA are those related to enrollment size of the district rather than extended to include certain other attributable costs relating in part to economic and geographic factors which may also affect the actual price of educational services. It is the contention of the Turner school district that the statutory scheme has not fully met the equality mandate, and that the SDEA's indifference to cost factors apart

from size is inadequate and inequitable by failing to recognize costs inherent to their urban geographic placement and their composite urban character because such failure denies their students equal educational opportunity and equal protection as defined by their fundamental right to an education.

Our initial report sought to explore these issues in a framework of both sound school finance theory and wise educational and social policy. To engage those issues, several presumptions and observations were necessary. First, under the explicit claim that equalized educational services are of benefit to children, it was argued that the Kansas legislature has unmistakably concurred by the statutory enactment of the SDEA. Second, it was linearly argued that the legislature has by its actions through the SDEA and certain other constitutional provisions made implicit and explicit commitments to the concepts of fiscal resource impacts and equal opportunity and equal protection. Third, it was declared that the generally accepted principle by the scholarly community and likewise many courts that resource inputs are the only realistic measure of fiscally defined equal opportunity forces the conclusion that the relationship of wealth to educational opportunity provides a conceptual underpinning for formula evaluation which requires strict adherence to school finance theory in a social policy context. Fourth and finally it was concluded that under such rigorously principled standards, a state aid formula should have a powerful impact over time by eliminating wealth-related disparities and should not operate to the disadvantage of any identifiable populations.

This framework permitted operationalization of an assessment of the Kansas School District Equalization Act by defining how equal educational opportunity should operate in regard to every school district and every child. Specifically, the framework permitted formula assessment by answering five specific questions. First, has the SDEA successfully eliminated wealth-related educational opportunity? If it has not, legislative intent in enacting an equalization formula is by definition violated. Second, are there formula-based inequities in the enrollment category classifications? If so, any inequities should not be irrationally related to the aims of equalization, and any inconsistencies should further show compelling interest. Third, are there inequities related to the enrollment categories which disadvantage Turner USD 202 by its fourth enrollment category status? If such flaws exist, their specific effect on Turner would be seen as arbitrary and contrary to equal opportunity and fiscal neutrality. Fourth, what may be concluded about the operation of the SDEA's effect on the actual delivery of educational services in the Turner district? If there are differential statistical effects which bear out in real dollars and genuine opportunity, they should not be allowed to stand as a compelling interest or even as rationally furthering a legitimate

state purpose. Fifth and finally, if there are inequities, how might they be redressed?

To conduct such an analysis, an operational framework was required that would test assumptions and probe for structural flaws in the state's finance formula. A cadre of accepted principles of equity and sophisticated statistical measurement tools were used to provide an intensive assessment of equity in the state aid formula.

## OPERATIONAL FRAMEWORK

Three generally accepted principles of equity common to the research literature in school finance (resource accessibility, wealth neutrality, and equal tax yield) were used in the study. The resource accessibility standard asked whether students have access to resources to appropriately meet their educational needs. The wealth neutrality standard then asked whether those resources are unacceptably related to local wealth and residence. The tax yield standard finally asked whether equal tax effort results in equal yield. These standards were then linked to statistical assessment methodologies.

The resource accessibility standard was evaluated by looking at the degree of dispersion of wealth and budgets per pupil around median values of each enrollment category. Because there is also logic for considering mean wealth and expenditures, especially since the median and mean may provide vastly different pictures of the same distribution, mean values were also examined statistically. If wealth and budgets vary widely, such tests should help identify covariant relationships. The second standard of wealth neutrality explored those relationships by further measuring neutrality of wealth and resources. If local wealth and budgets are positively correlated, educational opportunity impermissibly becomes a function of local wealth. If counterargument claims that variations in budgets are related to some purpose such as compensating for differences in certain costs, then tests for significant cost differentials between affected groups should prove that rational differences in expenditure levels actually exist. If differences are not significant or are erratic or unrelated to relevant costs, both resource accessibility and wealth neutrality are violated because differences are illegitimate and wealth-discriminatory. Finally, the taxpayer equity standard was assessed to estimate whether equal tax yield for equal tax effort exists. If one community can produce higher tax yield with less tax effort, the taxpayer equity standard is violated and educational opportunity is barrier-laden. Although fraught with difficulty given the present lack of sophistication in research methodology aimed at evaluating taxpayer equity, the research design in this study permitted qualitative assessment of taxpayer equity by proxying

results of the wealth neutrality standard to the intent of taxpayer equity and by simple observation about whether taxpayer equity can exist given widely varying tax rates in the state.

In addition to statistical equity measurement, assessment of the state aid formula's impact on Turner USD 202 was made by examining how the formula actually translates into real world effects. Comparisons were made by holding the Turner school district up against all other school districts, all other fourth enrollment category districts, and all geographically adjacent fifth category districts. Those comparisons focused on factors affecting the district's ability to compete in the educational service delivery market. Factors considered included per pupil measures of assessed valuation, taxable income, income tax rebate, total wealth, tax rate, and budget. Additionally, selected districts were compared on such items as pupil-teacher ratios, salaries, teacher turnover, fiscal resource management, and demographic variables. The conceptual framework thus provided a theoretical underpinning for equity evaluation, while statistical measurement provided an operational framework of hard data on which to base the original report's conclusions.

## RESULTS OF THE ORIGINAL ANALYSIS

The resource accessibility standard was assessed first by range measures comparing wealth and budget per pupil using the median as the point of analysis. These values were reported as unrestricted and restricted ranges of budgets per pupil and wealth per pupil. The total distribution was further examined using mean-based measures on the same variables and reported as means, standard deviations, coefficients of variation, and skewness for the state and all enrollment categories. Finally, tests for significant differences in expenditure levels among and between the individual enrollment categories were conducted to see if enrollment categories actually spend the amounts per pupil the formula assumes and rewards.

The wealth neutrality standard was measured by Pearson correlation coefficients among select variables and by multiple regression equations. Correlation and regression values were reported as coefficients and variances explaining contribution of wealth variables to budgets per pupil. These measures captured both the size of potential inequities and the relationship between wealth and budgets per pupil in the state and within enrollment categories. Taxpayer equity was simultaneously evaluated by observing the correlation of tax base to per pupil budgets and the estimates of contribution by wealth variables to budgets as calculated in the regression equations. For both the resource accessibility and wealth neutrality/taxpayer equity standards, measures were applied in the original study to the

years 1978-79, 1983-84, and 1988-89 to gain a longitudinal assessment of changes that may have affected equity.

***Resource Accessibility***

Results of the original analysis set out several important conclusions. In assessing resource accessibility, median-based tests identified several potential problems. First, wealth varies substantially within the state and within enrollment categories. Second, even when wealth extremes are removed, those variations remain at significant levels. Third, per-pupil budgets also vary widely and often in seeming response to local wealth. Fourth, these variations appear more parallel to the economic fortune of the state than to any formulaic intent because, despite the intended inverse relationship of the SDEA on wealth and aid, wealth and budgets appear to remain positively linked. Fifth, in certain time periods the fourth enrollment category experienced the greatest potential inequity as it held the largest increase in disparity of per-pupil budgets to wealth per pupil. Finally, this phenomenon was apparently related to the use of enrollment category medians in determining budgets per pupil because neither medians nor lids automatically result in increased equity and in fact may exacerbate disparities as wealthy districts are able pull ahead of poorer districts.

Mean-based measures permitted additional conclusions about both wealth and budgets per pupil. First, because median wealth and budgets per pupil and mean wealth and budgets per pupil are significantly apart in Kansas, there is reason to believe that the SDEA's reliance on the median as the single descriptor of <u>equity</u> is problematic because the formula has held fourth category districts to a lower median budget per pupil which is not reflected in actual spending behaviors. Second, it appears that the SDEA's reliance on the median as the single predictor of <u>adequacy</u> is unevenly accurate because medians both underestimate and overestimate actual expenditures and wealth patterns. These issues raise the question of uniformity and sufficiency of the SDEA. Third, for Category IV the lower median budget per pupil for state aid purposes results in the least equitable performance in the distribution and is further exacerbated by underestimating the true cost of education because the skewness of mean and median budgets indicates that districts apparently must spend more than the fourth category median rewards. Fourth, because the median budget per pupil fails to approximate the mean by the greatest amount in Category IV, it was assertable that the fourth enrollment category median used in state aid calculation may be the most inaccurate of all medians in reflecting the true costs of education. Fifth and finally, the state's reliance on the median as its indicator of adequacy and equity may be in error because it does not appear to measure the most significant behaviors in the distribution.

Several enrollment categories also failed tests for significant differences in levels of expenditures in the original study. This finding was critical because it supported Turner's assertion that the legislative justification for a higher median budget per pupil for Category V is unreasonable and arbitrary. In other words, it was assertable from the data that the costs of fourth and fifth category districts are in fact similar and that the use of different medians per pupil is unjustified by any demonstrable relationship to either costs or equal educational opportunity. By this logic, enrollment categories are not effective or rational because they neither accurately reflect the efficiencies of size or take into account whatever costs actually make the fourth and fifth categories more similar than different.

Under the above conditions, the analysis concluded that the state aid formula failed the resource accessibility standard by failing to account for educational costs according to needs, and by basing the enrollment category medians for the fourth and fifth categories on illegitimate differences.

***Wealth Neutrality and Taxpayer Equity***

The second standard of wealth neutrality required the relationship between wealth and budgets to be at least neutral, if not inverse covariants. As a somewhat natural byproduct of wealth neutrality, the third standard of taxpayer equity was also examined. Although it was observable on its face that state aid under the SDEA is inversely related to local wealth, it was critical to Turner's argument to determine if the formula has completely eliminated wealth-related educational opportunity. If the SDEA failed to break the link, positive results of tests for statistically significant relationships between budgets and wealth at any level would indicate that the wealth neutrality standard, and consequently the taxpayer equity standard, is violated. To determine the results, Pearson correlation coefficients and regression equations were used to assess the relationship between variables and to predict the contribution of each variable to observed variance.

The results indicated that in most instances there is still a positive relationship between budget per pupil and wealth at the state level and within enrollment categories. First, despite a general trend toward equity, movement was only moderate because the link between budgets and wealth per pupil expressed by correlation coefficients was significant. Second, only Category IV moved against the equity trend, a disturbing feature because it reaffirmed a generally uneven performance of the SDEA and emphasized an apparently increasing singular disadvantage for districts in the fourth category. Third, regression analysis found that total wealth per pupil explained up to 34% of variance, except in Category IV where it explained only .0026%. The wide variation confirmed the argument that the touted inverse relationship of the SDEA has not provided a uniform or rational

relationship between funding and equal educational opportunity across enrollment categories because performance has been uneven. Fourth and finally, severe implications for taxpayer inequity were present under conditions which permitted widely varying tax rates, tax yields, and positively correlated wealth and budgets per pupil across the 304 school districts of Kansas.

*Real World Effects*

The analysis finally drew conclusions about the impact of the formula on the Turner school district in a market context. First, it was seen that Turner exhibits substantial tax effort while spending less per pupil. Second, it was noted that the state aid formula did not fully offset that effort because even under the SDEA's inverse relationship of state aid to wealth, Turner's tax rate was not greatly different than the tax rate of its wealthier neighbors. Third, it was obvious that Turner educates fewer children on fewer dollars per pupil than was true of its large fifth category neighbors, despite the logic of the SDEA which argues that except in the fifth category, higher costs should follow lower numbers of pupils. Although the original analysis was extremely complex, the result was that Turner held less wealth, exerted higher tax effort, was awarded less state aid because of the formula's emphasis on enrollment category divisions, held demographics of disadvantage, and educated fewer children on a lower budget per pupil. At the same time, wealthier and more efficient districts in the fifth enrollment category were permitted access to greater resources through a higher median budget per pupil with less actual tax effort. These events resulted in a difference in bottom line dollars that was seen to have a substantially restrictive effect on education in the district. Those effects included direct impacts on educational programs such as inability to expand elementary guidance services, high school guidance staff reductions, reduction or deferrals in hiring social workers, and reductions or deferrals in hiring instructional personnel.

The initial analysis concluded that specific harm to the Turner school district had occurred as a result of the state aid formula, especially as the structure of enrollment categories were then operative. The concluding argument stated that if the SDEA is to truly provide equality of educational opportunity through an equalization formula, then uneven performance on equity standards and indifference to cost differentials other than economy of scale through enrollment category medians must be corrected. In that an equalization formula should uniformly eliminate wealth-related opportunity over time, the SDEA was judged inequitable because the formula's operation is not uniform and the enrollment categories were seen as doing little more than focusing resources on economic efficiencies while ignoring data on unmet educational needs as expressed by fiscal disparity.

## RESULTS OF THE ADDENDUM

The original study examined the Kansas School District Equalization Act longitudinally across the time periods 1973-74, 1978-79, 1983-84, and 1988-89. Because delays and postponements have occurred, some new data have become available for 1989-90 and 1990-91. To minimize dispute among parties regarding whether the analysis holds true given new information, data for 1989-91 were reanalyzed. Tables 2-15 present the full set of data for all years contained in the original study and this addendum.

***Resource Accessibility***

Data on the resource accessibility standard are presented in Tables 2-5. Table 2 examines unrestricted and restricted range measures on the variables of wealth and budgets per pupil. Table 3 examines means, standard deviations, coefficients of variation, and skewness on the variable of budgets per pupil. Table 4 examines the same measures on the variable of wealth per pupil. Table 5 presents results of tests for significant differences in mean budgets per pupil. All measures were examined for the state and across the enrollment categories.

Range measures of wealth and budgets per pupil presented in Table 2 indicate that the same general relationships contained in the original study are carried forward to the years 1989-90 and 1990-91. Shifts that occurred were generally unfavorable to the balance of equity, as in 1989-90 in Category II where the range of restricted wealth per pupil dropped (-26%), but restricted range in budget per pupil rose (+32%). The same pattern was true for Category III where restricted wealth per pupil dropped (-40%) but restricted budget per pupil rose (+19%). Category IV improved slightly as the restricted range of wealth rose (+6%), while the restricted range of budgets per pupil dropped (-15%). While it is true that reduction in wealth disparity is generally desirable, increases in budget disparity are not. As observed in the original study, the formula is not working properly when (a) budgets and wealth disparity increase in tandem, and (b) when budgets can become more disparate while wealth decreases because it indicates that very wealthy districts can access a tax base that permits them to pull ahead of the group. From the range measures, both conditions continue to be present in Kansas.

Results for 1990-91 were more difficult to assess because of changes in wealth definitions for the state. Due to statewide reappraisal of property and a one-year suspension of the school finance formula in 1990-91, data on wealth factors were not always directly comparable. However, assessment of budget per pupil disparity was still feasible as seen in Table 2, with the same general relationships continuing. The most striking feature is that Category I schools continue to increase disparity in budgets per pupil (+21%) faster than all other categories. Disparity among Category IV districts is also growing fairly

rapidly (+11%). The most equitable performance was shown in Category V where budget disparity decreased (-3.4%). But as seen in 1989-90 data, Category V also saw an enormous increase (+61%) in wealth, largely attributable to income tax rebate, a factor not equally available to all districts (*also see* Table 6 where the correlation between budget per pupil and income tax= .38). Under these conditions, it was concluded from Table 2 that resource accessibility trends on median-based measures in the state remain largely unchanged, and that any changes have generally been erratic and/or unfavorable to equity achievement.

Table 3 examines means, standard deviations, coefficients of variation, and skewness of the variable of budgets per pupil. Table 4 examines the same data on the variable of wealth per pupil. As seen in Table 3, trends in budgets per pupil remained relatively constant for new years' data. Standard deviations and coefficients of variation increased somewhat from 1988 to 1991 for the state and in Categories I, III and IV, confirming the disparity seen in the range measures. Importantly, the significant degree of skewness between mean and median budgets per pupil for some categories in the distribution continued to increase, with only Category III reporting a questionable improvement (-.16). While some reduction in skewness occurred in Category IV from 1988-89 (2.28) to 1989-90 (1.62), the trend reversed for 1990-91, with skewness increasing sharply (2.14).

The data in Table 4 on wealth per pupil using the same measures of variation generally confirmed variability observed in Table 2. It should be noted that data for 1990-91 were not directly comparable because wealth was not computed by the state during the off-formula year. However, data in Table 4 generally indicated that variability in budgets occurred in tandem with variability in wealth. Summatively, greater variability occurred at the state level and in Categories I, II, III and IV as seen in the data on 1989-90. As expected, the most significant behavior was found in Category IV where wealth skewness changed signs, increasing from 1988-89 (-.08) to 1989-90 (+.32). Such behavior reflects unfavorably on formula operation by indicating growing disparity in mean and median wealth, with corresponding skewness of budgets per pupil as seen earlier. Under these conditions, it was concluded from Tables 3-4 that resource accessibility trends on mean-based measures remained largely unchanged, and that any changes have generally been unfavorable to equity achievement.

Table 5 presents tests for significant differences in mean budgets per pupil for all enrollment categories. As seen in Table 5, no positive change occurred between 1988-89 and 1990-91. As in the original study, no significant differences in budgets per pupil were observed between Categories III and V, and Categories IV and V. Although some slight improvement could be seen from 1988-89 to 1990-91 between Categories IV and V, the change was not enough to be substantial. Additionally, any

improvement was likely not a function of the state aid formula, except by virtue of additional budget authority in legislation granted to the fourth enrollment category--a result explainable by increased local tax effort rather than increased state aid. Under these conditions, it was concluded in Table 5 that resource accessibility as measured by tests for significant differences in budgets per pupil among the enrollment categories remains largely unchanged, that differential medians for state aid purposes are illegitimate based on actual expenditure patterns, and that any changes have been more attributable to local effort than to increased formula equity.

***Wealth Neutrality and Taxpayer Equity***

Data on wealth neutrality and taxpayer equity standards are presented in Table 6. Table 6 contains Pearson correlation coefficients for per pupil measures of wealth, budget, adjusted valuation, and taxable income. Additionally, regression equation results are presented as variance estimates ($r^2$). It should again be noted that not all data were directly comparable because changes in wealth definition and/or lack of calculated wealth for certain years required a slightly different methodology in reporting data on 1989-90 and 1990-91. Despite this difficulty, a useful estimate of performance of the SDEA on the wealth neutrality and taxpayer equity standards was still available.

The data in Table 6 indicate that significant correlations between wealth and budgets per pupil continue in the state and within some enrollment categories. At the state level, the relationship between wealth and budget produces a fairly strong correlation (.60). Category I (.61), Category II (.54), and Category III (.32) produce the highest correlations, with a significant relationship also present in Category IV (.23). Not surprisingly, the largest enrollment category shows a stronger relationship between taxable income and budgets per pupil (.32). Very significantly, Category IV changed signs on the correlation between budgets per pupil and taxable income, moving from -.26 in 1988-89 to .02 in 1990-91, confirming the increasing role of income in the formula for some districts.

When correlation coefficients are considered in tandem with variance estimates from the regression equations (shown in parentheses in Table 6), the data permit several conclusions. First, the descriptive correlation coefficients are confirmed by the more powerful inferential regression analysis, making causal statements permissible. Consequently, it can be concluded that the wealth base of the community strongly influences the level of budget per pupil. Second, wealth relationships have not lessened appreciably over time. Third, some districts have been adversely impacted by overemphasis in the formula on income, while at the same time unable to reach income as a tax base. Fourth, because wealth and budgets vary in tandem, it may be assumed that the formula does not provide for taxpayer equity because a poorer

district requires a higher tax rate to produce the same revenue available to a district rich in property or income. Fifth and most importantly, the formula has unevenly affected school districts by failing to either offset the effects of local wealth on budgets per pupil, or by failing to provide a uniform source of revenue to place all districts on an equal footing. Under these conditions, it was concluded from Table 6 that wealth neutrality and taxpayer equity as measured by correlation coefficients and regression analysis remains largely unchanged.

In the context of statistical analysis of the formula under the resource accessibility, wealth neutrality, and taxpayer equity standards, reanalysis of the data through 1991 as contained in this addendum permits the observation that the formula has not provided a uniform and equitable distribution of resources according to needs.

***Real World Impacts***

The addendum also extended the data analysis through 1990-91 on whether the formula had negative impacts on Turner USD 202 in a real world dollar and educational context. Results are presented in Tables 7-15. Tables 7-8 compare the Turner school district to all districts in the state on the measures of wealth per pupil, adjusted assessed valuation per pupil, taxable income per pupil, income tax rebate per pupil, tax rate, and budget per pupil. Tables 9-10 compare the Turner school district to all other fourth enrollment category districts on the same variables. Tables 11-12 compare the Turner district to its neighboring fifth enrollment category districts on the same variables. Table 13 compares the Turner district to neighboring fifth category districts on select fiscal variables of cash carryover, unused budget authority, and transfers of idle funds. Table 14 compares the Turner district to its fifth category neighbors on market factors of teacher and administrator salaries and teacher turnover. Finally, Table 15 compares the Turner district to its fifth category neighbors on demographic factors of disadvantage.

The data in Tables 7-8 indicate that little has changed when comparing the Turner district to the other 303 school districts in the state. Disparity in wealth per pupil in Turner decreased slightly, rising from 54% of the state's median in 1988 to 58% in 1990. At the same time, disparity in income tax rebate per pupil grew from 57% in 1988 to only 51% in 1990. Tax effort decreased slightly, with Turner exerting 112% of the median state tax effort compared to 134% in 1988. Disparity in budget per pupil remained almost unchanged, with Turner spending 74% of the median budget per pupil for the state in 1990 compared to 75% in 1988. Finally, the pupil-teacher ratio in Turner improved in 1990, but remained 17% higher than the median ratio for the state. From these data, improvements have mostly been offset by misfortunes, especially in declining income tax rebate.

Data in Tables 9-10 also indicate that little has changed when comparing the Turner district to other fourth category districts. Where changes have occurred, improvements have again been offset by declines. Disparity in wealth per pupil worsened from 70% of the category's median in 1988 to only 68% in 1990, and income tax rebate per pupil also worsened from 52% of the category's median in 1988 to only 47% in 1990. The tax rate improved from 108% of the median in 1988 to 97% in 1990, while budget per pupil remained slightly above the median. Likewise, the pupil-teacher ratio for Turner improved from 103% of the category's median in 1988 to 93% in 1990. From these data some improvement was noted, but it was also concluded that the district is negatively impacted by the formula's emphasis on income factors. It was further noted that improvement in tax rate was likely more attributable to reappraisal than to the state aid formula, and that improvements in budget per pupil and pupil-teacher ratios were more attributable to local tax effort and enrollment changes in other districts than to any direct benefit accrued by the Turner district.

Data in Tables 11-12 indicate general change for the worse when comparing the Turner district to neighboring fifth enrollment category districts. In comparing income tax rebate, the Turner district lost ground. Turner's income tax rebate dropped from 15% of the wealthiest district's entitlement in 1988 to only 10.6% in 1990. Of the three neighboring large districts, Turner managed to maintain its position in relation to income tax rebate with only the relatively poor Kansas City district. In comparing tax rate, Turner exhibited increased true tax effort, increasing from 93% of its wealthiest neighbor's tax rate in 1988 to 143% in 1990. These data were consistent with other findings in that as income tax rebate grew in importance in the formula and as property reappraisal was completed, true tax effort in wealthy districts conceivably was able to drop, with the inverse true for Turner. In comparing budget per pupil, Turner's position remained relatively unchanged despite increased true tax effort, spending only 86% of the budget per pupil of its wealthiest neighbor and with a generally higher pupil-teacher ratio. From these data, it was concluded that while intervening events made direct comparison of some variables difficult, the overriding observation was that changes in the distribution held no significant or lasting improvement for the Turner district.

Data in Table 13 examined select information on local tax decisions and factors relating to fiscal management. The Turner district was compared to its fifth category neighbors on cash carryover, unused budget authority, and transfers of idle funds. The data again generally noted no lasting improvements in Turner's financial status. The district continues to have exercised all its unused budget authority, leaving no option to increase local budgets by this method. In contrast, two of its wealthier neighbors have experienced different scenarios. USD

512 Shawnee Mission has opted since 1988-89 to draw down nearly $2.4 million in unused budget authority--a factor permitting observed disparity to increase because of relatively low tax effort and higher budget per pupil. Conversely USD 233, Olathe, has continued to accumulate nearly $3.25 million in unused budget authority, allowing for considerable flexibility. Finally, although direct comparison of cash carryover and transfers of idle funds was not possible due to lack of data, it was concluded that Turner's stated expectation of higher cash carryover for the current year is offset by anticipation of spending back down to a low cash position in the upcoming year. From these data, it was concluded that little has changed that would mitigate any of Turner's claims since completion of the original analysis.

Data in Table 14 compared salaries and teacher turnover in Turner's competitive marketplace. The data again indicate that no significant improvements have occurred. Teacher salaries remain lower in Turner ($28,568) than in any other contiguous fifth category district, and are significantly lower than in the wealthiest neighboring district ($35,364). At the same time, teacher turn-over in Turner (11%) remains higher than in any other district. From the data in Table 14, it was again concluded that little has changed since the original analysis.

Data in Table 15 provided the final comparison in Turner's marketplace by revisiting the district's demographic profile on variables relating to high cost disadvantaged students. The data again reflect no real change. Turner contains the second highest percentage of socioeconomically disadvantaged students, while being denied the additional funding for urban demographics given to its wealthier fifth enrollment category neighbors. From the data in Table 15, it was concluded that Turner's demographic profile is not accorded the same recognition in the state aid formula that its fifth enrollment category neighbors receive.

## CONCLUSIONS

The findings of this addendum are effectively identical to the original analysis. Those findings are that the Turner school district holds less wealth, exerts higher tax effort, is given less revenue because the SDEA defines educational needs by enrollment size rather than student needs, holds disadvantaged demographics, and educates fewer children on a lower budget per pupil. At the same time, wealthier schools in the fifth category are given greater resources through higher median budgets per pupil at less tax effort. The bottom line becomes that Turner receives fewer dollars in a setting where equalized resources could have made a genuine difference for needy children.

The findings of the consultants' original analysis are therefore confirmed by this addendum.

## ENDNOTES


1. David C. Thompson. Commentary, School Finance and the Courts: A Reanalysis of Progress. West's Education Law Reporter, 59 Ed.Law No.4, pp. 945-963, 1990.

2. 347 U.S. 483, 74 S.Ct. 686, 98 L.Ed. 873 (1954).

3. David C. Thompson; Julie K. Underwood; William E. Camp. Equal Protection Under Law: Reanalysis and new Directions in School Finance Litigation. In Spheres of Justice in American Education: The 1990 Yearbook of the American Education Finance Association. Harper & Row, 1990.

# TABLES

TABLE 1

ENROLLMENT CATEGORIES
1973-1991

| School Year | District Enrollment | Median Budget | Adjustment Factor |
|---|---|---|---|
| **1973 Enrollment Categories** | | | |
| I= | Under 400 | $936 | None |
| II= | 400-1,299 | 936 | -.23111 (E-400) |
| III= | Over 1300 | 728 | None |
| **1978 Enrollment Categories** | | | |
| I= | Under 200 | $2,062 | None |
| II= | 200-399 | 2,062 | -1.280 x (Line 2-200) |
| III= | 400-1299 | 1,806 | -.400 x (Line 2-400) |
| IV= | Over 1300 | 1,448 | None |
| **1983 Enrollment Categories** | | | |
| I= | Under 200 | $3,258 | None |
| II= | 200-399 | 3,258 | 2.9 (E-200) |
| III= | 400-1699 | 2,672 | .4146 (E-400) |
| IV= | 1700-9999 | 2,221 | None |
| V= | Over 10,000 | 2,221 | None |
| **1989 Enrollment Categories** | | | |
| I= | Under 200 | $5,116 | None |
| II= | 200-399 | 5,116 | -1.645 (E-200) |
| III= | 400-1799 | 4,787 | -1.125 (E-400) |
| IV= | 1800-9999 | 3,077 | None |
| V= | Over 10,000 | 3,329 | None |
| **1990 Enrollment Categories** | | | |
| I= | Under 200 | | |
| II= | 200-399 | | |
| III= | 400-1799 | DNA | |
| IV= | 1800-9999 | | |
| V= | Over 10,000 | | |
| **1991 Enrollment Categories** | | | |
| I= | Under 200 | $5,343 | None |
| II= | 200-399 | 5,343 | -.965 (E-200) |
| III= | 400-1799 | 5,150 | -1.02875 (E-400) |
| IV= | 1800-9999 | 3,504 | None |
| V= | Over 10,000 | 3,805 | None |

TABLE 2

WEALTH AND BUDGET PER PUPIL RANGE MEASURES
FOR THE RESOURCE ACCESSIBILITY STANDARD

| | N | UR WPP | % CHG | RR WPP | % CHG | UR BPP | % CHG | RR BPP | % CHG |
|---|---|---|---|---|---|---|---|---|---|
| 978-79 | | | | | | | | | |
| ate | 306 | $258268 | -- | $122661 | -- | $2546 | -- | $1282 | -- |
| -199 | 25 | 209792 | -- | 159887 | -- | 2041 | -- | 1886 | -- |
| 00-399 | 62 | 169997 | -- | 108148 | -- | 1463 | -- | 1078 | -- |
| 0-1299 | 159 | 155144 | -- | 39077 | -- | 1440 | -- | 775 | -- |
| 00+ | 60 | 106390 | -- | 52583 | -- | 691 | -- | 319 | -- |
| 983-84 | | | | | | | | | |
| ate | 304 | $581914 | 125% | $268937 | 119% | $5199 | 104% | $2363 | 84% |
| -199 | 36 | 503998 | 140% | 467917 | 193% | 3900 | 91% | 2713 | 44% |
| 00-399 | 68 | 406857 | 139% | 274197 | 154% | 2298 | 57% | 1567 | 45% |
| 0-1899 | 162 | 292660 | N/C | 195984 | N/C | 2186 | N/C | 861 | N/C |
| 00-9999 | 34 | 88419 | N/C | 59797 | N/C | 727 | N/C | 482 | N/C |
| 0,000+ | 4 | 64715 | N/C | 8125 | N/C | 903 | N/C | 166 | N/C |
| 988-89 | | | | | | | | | |
| tate | 303 | $588983 | 1% | $177689 | -34% | $6020 | 16% | $3469 | 47% |
| 199 | 35 | 515954 | 2% | 165147 | -65% | 4711 | 21% | 2898 | 7% |
| 0-399 | 68 | 348353 | -14% | 190990 | -30% | 3050 | 33% | 1664 | 6% |
| 0-1899 | 156 | 564194 | 93% | 218415 | 11% | 2557 | 17% | 1129 | 31% |
| 00-9999 | 39 | 71134 | -20% | 54912 | -8% | 1651 | 127% | 836 | 73% |
| ,000+ | 5 | 104334 | 61% | 36255 | 346% | 495 | -45% | 495 | 198% |
| 989-90 | | | | | | | | | |
| tate | 303 | $618818 | 5% | $138052 | -22% | $6615 | 9.8% | $3492 | .66% |
| -199 | 35 | 445312 | -14% | 120658 | -26% | 5196 | 10% | 3840 | 32% |
| 0-399 | 68 | 312939 | -10% | 148552 | -22% | 3131 | 2.6% | 1649 | -.09% |
| 0-1899 | 156 | 599074 | 6% | 130951 | -40% | 2417 | -5% | 1347 | 19% |
| 00-9999 | 39 | 74089 | 4% | 58571 | 6% | 1814 | 9% | 708 | -15% |
| 0,000+ | 5 | 94474 | 9% | 58679 | 61% | 522 | 5% | 441 | -10% |
| 990-91 | | | | | | | | | |
| tate | 303 | N/A | N/A | N/A | N/A | $7933 | 20% | $3615 | 3.5% |
| -199 | 35 | N/A | N/A | N/A | N/A | 6265 | 20% | 4647 | 21% |
| 0-399 | 68 | N/A | N/A | N/A | N/A | 3693 | 18% | 1669 | 1.2% |
| 0-1899 | 156 | N/A | N/A | N/A | N/A | 2565 | 6% | 1439 | 6.8% |
| 00-9999 | 39 | N/A | N/A | N/A | N/A | 2092 | 15% | 789 | 11% |
| 0,000+ | 5 | N/A | N/A | N/A | N/A | 536 | 3% | 425 | -3.4% |

= Number of districts.
R WPP= Unrestricted range of wealth per pupil.
CHG= Percent change between the present and prior time periods.
R WPP= Restricted wealth per pupil.
R BPP= Unrestricted range in budget per pupil.
R BPP= Restricted range in budget per pupil.
/C= Noncomparable data.
/A= Not applicable or not available.

TABLE 3

DESCRIPTIVE MEASURES ON BUDGET PER PUPIL
FOR THE STATE AND ENROLLMENT CATEGORIES
RESOURCE ACCESSIBILITY STANDARD

| | Mean | Standard Deviation | Coefficient of Variation | Skewness |
|---|---|---|---|---|
| 983-84 | | | | |
| State | $3197.23 | $713.09 | .223 | 1.46 |
| ategory I | 4485.00 | 820.33 | .1829 | .37 |
| ategory II | 3588.62 | 388.81 | .1083 | .59 |
| Category III | 2943.81 | 274.77 | .0933 | 1.11 |
| Category IV | 2335.56 | 148.27 | .0634 | 2.06 |
| ategory V | 2541.52 | 95.69 | .0377 | .13 |
| 1988-89 | | | | |
| tate | $4388.09 | $980.59 | .2235 | 1.03 |
| ategory I | 6104.89 | 1045.76 | .1713 | .08 |
| Category II | 4891.90 | 550.19 | .1125 | .75 |
| Category III | 4127.75 | 447.89 | .1085 | -.37 |
| ategory IV | 3070.53 | 225.27 | .0734 | 2.28 |
| Category V | 3495.48 | 253.09 | .0724 | .41 |
| 989-90 | | | | |
| tate | $4697.22 | 1060.43 | .2258 | 1.05 |
| Category I | 6582.99 | 1100.43 | .1672 | .27 |
| ategory II | 5211.70 | 551.58 | .1058 | .74 |
| ategory III | 4443.66 | 459.66 | .1034 | -.01 |
| Category IV | 3249.22 | 260.47 | .0802 | 1.62 |
| Category V | 3738.43 | 249.26 | .0667 | .41 |
| 990-91 | | | | |
| State | $4834.33 | 1125.26 | .2328 | 1.40 |
| ategory I | 6871.66 | 1311.46 | .1906 | .74 |
| ategory II | 5299.41 | 558.01 | .1053 | 1.27 |
| Category III | 4572.33 | 474.68 | .1038 | -.16 |
| Category IV | 3366.23 | 299.87 | .0891 | 2.14 |
| ategory V | 3849.80 | 247.33 | .0642 | .38 |

TABLE 4

DESCRIPTIVE MEASURES ON WEALTH PER PUPIL
FOR THE STATE AND ENROLLMENT CATEGORIES
RESOURCE ACCESSIBILITY STANDARD

| | Mean | Standard Deviation | Coefficient of Variation | Skewness |
|---|---|---|---|---|
| 1983-84 | | | | |
| State | $142919 | $91851 | .64 | 1.75 |
| Category I | 284364 | 113361 | .40 | 1.32 |
| Category II | 176438 | 82217 | .47 | .94 |
| Category III | 113838 | 56836 | .50 | 1.14 |
| Category IV | 70891 | 17550 | .247 | .17 |
| Category V | 90100 | 27133 | .0312 | -.54 |
| 1988-89 | | | | |
| State | $113682 | $67655 | .595 | 3.36 |
| Category I | 186836 | 85656 | .458 | 3.16 |
| Category II | 131006 | 58709 | .449 | 1.95 |
| Category III | 99331 | 61291 | .617 | 4.69 |
| Category IV | 74495 | 15344 | .206 | -.08 |
| Category V | 109516 | 40354 | .368 | .60 |
| 1989-90 | | | | |
| State | $94071 | 59784 | .0635 | 4.33 |
| Category I | 146598 | 70445 | .4805 | 3.82 |
| Category II | 105984 | 6693 | .5092 | 2.49 |
| Category III | 85116 | 59086 | .6940 | 5.76 |
| Category IV | 66697 | 14964 | .224 | .32 |
| Category V | 57522 | 16696 | .649 | .04 |
| 1990-91[1] | | | | |
| State | N/A | N/A | N/A | N/A |
| Category I | N/A | N/A | N/A | N/A |
| Category II | N/A | N/A | N/A | N/A |
| Category III | N/A | N/A | N/A | N/A |
| Category IV | N/A | N/A | N/A | N/A |
| Category V | N/A | N/A | N/A | N/A |

[1] N/A= Data not available. For 1990-91 as an "off formula" year, no wealth was calculated by the state. Consequently, no change on statistical measures could be observed; however, given other indicators the prior year's values are at least true.

TABLE 5

COMPARISON OF MEAN BUDGET PER PUPIL
BY ENROLLMENT CATEGORY FOR 1983-84,
1988-89 and 1990-91
RESOURCE ACCESSIBILITY STANDARD

---

1983-84
Full Model 5 groups f=172.46 p= .0001 Post Hoc Test Results

| Category | Mean Difference | Scheffe test |
|---|---|---|
| vs 2 | $896.38 | 30.35* |
| vs 3 | 1541.19 | 112.25* |
| vs 4 | 2149.44 | 129.62* |
| vs 5 | 1943.48 | 21.82* |
| vs 3 | 644.81 | 31.95* |
| vs 4 | 1253.06 | 57.10* |
| vs 5 | 1047.10 | 6.65* |
| vs 4 | 608.25 | 16.68* |
| vs 5 | 402.29 | 1.01 |
| vs 5 | -205.97 | .24 |

1988-89
Full Model 5 groups f=163.12 p= .0001 Post Hoc Test Results

| Category | Mean Difference | Scheffe test |
|---|---|---|
| vs 2 | $1212.99 | 27.82* |
| vs 3 | 1997.15 | 91.65* |
| vs 4 | 3034.06 | 135.51* |
| vs 5 | 2609.41 | 24.38* |
| vs 3 | 764.15 | 22.72* |
| vs 4 | 1821.37 | 65.05* |
| vs 5 | 1396.41 | 7.43* |
| vs 4 | 1057.22 | 27.42* |
| vs 5 | 632.26 | 1.59 |
| vs 5 | -424.96 | .65 |

1989-90
Full Model 5 groups f=184.06 p= .0001 Post Hoc Test Results

| Category | Mean Difference | Scheffe test |
|---|---|---|
| vs 2 | $1371.29 | 33.17* |
| vs 3 | 2139.33 | 102.16* |
| vs 4 | 3333.17 | 158.40* |
| vs 5 | 2844.57 | 27.05* |
| vs 3 | 768.04 | 20.68* |
| vs 4 | 1962.48 | 71.47* |
| vs 5 | 1473.27 | 7.67* |
| vs 4 | 1194.45 | 33.98* |
| vs 5 | 705.24 | 1.84 |
| vs 5 | -489.21 | .81 |

TABLE 5
(continued)

0-91
1 Model 5 groups f=164.57 p= .0001 Post Hoc Test Results

| egory | Mean Difference | Scheffe test |
|---|---|---|
| s 2 | $1572.25 | 35.81* |
| s 3 | 2299.33 | 96.91* |
| s 4 | 3505.43 | 143.82* |
| s 5 | 3021.86 | 25.06* |
| s 3 | 727.08 | 15.22* |
| s 4 | 1933.18 | 56.95* |
| s 5 | 1449.60 | 6.10* |
| s 4 | 1206.10 | 28.45* |
| s 5 | 722.52 | 1.58 |
| s 5 | -483.58 | .65 |

ignificant at 0.95

TABLE 6

VARIANCE ESTIMATE
PEARSON CORRELATION COEFFICIENTS FOR
THE PER PUPIL MEASURES OF WEALTH, BUDGET,
ADJUSTED VALUATION, AND TAXABLE INCOME
WEALTH NEUTRALITY STANDARD

ance estimate ($r^2$) in parentheses

-84

| | AJVPP | TIPP | WPP |
|---|---|---|---|
| et per pupil to: | | | |
| e | .81 (.65) | .17 (.03) | .81 (.65) |
| gory I | .70 (.49) | .36 (.13) | .71 (.51) |
| gory II | .56 (.32) | .37 (.14) | .57 (.32) |
| gory III | .63 (.41) | .27 (.07) | .64 (.41) |
| gory IV | .02 (.0029) | -.32 (.11) | -.08 (.01) |
| gory V | .79 (.62) | .87 (.76) | .82 (.67) |

-89

| | AJVPP | TIPP | WPP |
|---|---|---|---|
| et per pupil to: | | | |
| e | .59 (.34) | .08 (.01) | .58 (.34) |
| gory I | .56 (.32) | .38 (.15) | .57 (.32) |
| gory II | .51 (.36) | .31 (.11) | .53 (.28) |
| gory III | .30 (.09) | .03 (.00957) | .30 (.09) |
| gory IV | .20 (.04) | -.26 (.07) | .05 (.0026) |
| gory V | .37 (.14) | .27 (.07) | .33 (.11) |

-90

| | TOTAL WPP | ITRebPP |
|---|---|---|
| et per pupil to: | | |
| e | .52 (.27) | -.19 (.04) |
| gory I | .54 (.30) | .08 (.01) |
| gory II | .61 (.37) | .33 (.11) |
| gory III | .27 (.08) | .003 (.00014) |
| gory IV | .31 (.1000) | .04 (.0014) |
| gory V | -.1 (.01) | .38 (.15) |

-91

| | TOTAL WPP[1] | ITRebPP |
|---|---|---|
| et per pupil to: | | |
| e | .60 (.36) | -.19 (.04) |
| gory I | .61 (.37) | .06 (.003) |
| gory II | .54 (.29) | .23 (.05) |
| gory III | .32 (.10) | .02 (.0004) |
| gory IV | .23 (.05) | .02 (.0004) |
| gory V | -.21 (.05) | .32 (.1) |

Uses 1989-90 numbers for wealth due to lack of state definition.
hanges in wealth definition or lack of calculated wealth for certain
ears made direct comparison impossible. Total wealth per pupil as
efined below and income tax rebate per pupil were used as alternative
easures of capacity.

JVPP= Adjusted valuation per pupil
IPP= Taxable income per pupil
PP= The sum of AJVPP and TIPP
otal WPP= Total calculation of district wealth after 1988-89.
TRebPP= Income tax rebate per pupil

TABLE 7

COMPARATIVE WEALTH AMONG
STATE DISTRIBUTION
1988 and 1990

| | WPP | AVPP | TIPP | ITRPP | MILLS | BPP | PTR |
|---|---|---|---|---|---|---|---|
| 988-89 | | | | | | | |
| edian | $95254 | $6888 | $26905 | $253 | 53.0 | $4342 | 13.3 |
| SD 202 | 51259 | 36636 | 14612 | 144 | 71.0 | 3214 | 18.6 |
| | | | | | | | |
| 990-91 | | | | | | | |
| edian | $77941[1] | N/A | N/A | $316 | 51.55 | $4784 | 12:1 |
| SD 202 | 45073 | N/A | N/A | 162 | 57.56 | 3529 | 14:1 |

Figures for WPP are 1989-90 actual because adjusted valuation
nd taxable income were not available due to changes in calculating
ealth and off-formula years that resulted in only one available
ealth factor. These data were used, however, to capture an
stimate of roughly comparable years as if all factors were constant.

EDIAN= Median for the state
PP= Wealth per pupil
VPP= Adjusted assessed valuation per pupil
IPP= Taxable income per pupil
TRPP= Income tax rebate per pupil
ILLS= General fund tax rate
PP= Budget per pupil
TR= Pupil/teacher ratio (Source: KASB)
/A= Not available or not applicable

TABLE 8

COMPARATIVE WEALTH AMONG
STATE DISTRIBUTION
AS A PERCENT
1988-89 and 1990-91

| | WPP | AVPP | TIPP | ITRPP | MILLS | BPP | PTR |
|---|---|---|---|---|---|---|---|
| 988-89 | | | | | | | |
| edian | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| SD 202 | 54% | 53% | 54% | 57% | 134% | 75% | 140% |
| 990-91 | | | | | | | |
| edian | 100%[1] | N/A | N/A | 100% | 100% | 100% | 100% |
| SD 202 | 58% | N/A | N/A | 51% | 112% | 74% | 117% |

See note 1 in Table 7.

EDIAN= Median for the state
PP= Wealth per pupil
VPP= Adjusted assessed valuation per pupil
IPP= Taxable income per pupil
TRPP= Income tax rebate per pupil
ILLS= General fund tax rate
PP= Budget per pupil
TR= Pupil/teacher ratio (Source: KASB)
/A= Not available or not applicable

TABLE 9

COMPARATIVE WEALTH AMONG
FOURTH ENROLLMENT CATEGORY DISTRICTS
1988-89 and 1990-91

| | WPP | AVPP | TIPP | ITRPP | MILLS | BPP | PTR |
|---|---|---|---|---|---|---|---|
| 988-89 | | | | | | | |
| edian | $73,250 | $45,191 | $26,372 | $275 | 65.96 | $2985 | 18.0 |
| SD 202 | 51,561 | 38,258 | 15,542 | 156 | 71.0 | 3252 | 18.6 |
| 990-91 | | | | | | | |
| edian | $66,230[1] | N/A | N/A | $342 | 59.9 | $3290 | 15:1 |
| SD 202 | 45,073 | N/A | N/A | 162 | 57.56 | 3529 | 14:1 |

See note 1 in Table 7.

EDIAN= Median for the state
PP= Wealth per pupil
VPP= Adjusted assessed valuation per pupil
IPP= Taxable income per pupil
TRPP= Income tax rebate per pupil
ILLS= General fund tax rate
PP= Budget per pupil
TR= Pupil/teacher ratio (Source: KASB)
/A= Not available or not applicable

TABLE 10

COMPARATIVE WEALTH AMONG
FOURTH ENROLLMENT CATEGORY DISTRICTS
AS A PERCENT
1988-89 and 1990-91

| | WPP | AVPP | TIPP | ITRPP | MILLS | BPP | PTR |
|---|---|---|---|---|---|---|---|
| 1988-89 | | | | | | | |
| Median | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| USD 202 | 70% | 81% | 55% | 52% | 108% | 108% | 103% |
| 1990-91 | | | | | | | |
| Median | 100%[1] | N/A | N/A | 100% | 100% | 100% | 100% |
| USD 202 | 68% | N/A | N/A | 47% | 97% | 107% | 93% |

[1] See note 1 in Table 7.

MEDIAN= Median for the state
WPP= Wealth per pupil
AVPP= Adjusted assessed valuation per pupil
TIPP= Taxable income per pupil
ITRPP= Income tax rebate per pupil
MILLS= General fund tax rate
BPP= Budget per pupil
PTR= Pupil/teacher ratio (Source: KASB)
N/A= Not available or not applicable

TABLE 11

COMPARISON OF USD 202
AND NEIGHBORING FIFTH ENROLLMENT DISTRICTS
1988-89, 1989-90, and 1990-91

| USD | FTE | WPP | AVPP | TIPP | ITRPP | MILLS | BPP | PTR |
|---|---|---|---|---|---|---|---|---|
| 1988-89 | | | | | | | | |
| 512 | 29000 | $171567[1] | $96184 | $75382 | $953 | 76.29 | $3756 | 17.7 |
| 33 | 12682 | 80984 | 53549 | 27435 | 288 | 92.94 | 3787 | 16.2 |
| 00 | 22345 | 67223 | 39633 | 27585 | 288 | 49.03 | 3329 | 18.7 |
| 202 | 3800 | 51259 | 36646 | 14612 | 144 | 71.0 | 3214 | 18.6 |
| 1990-91 | | | | | | | | |
| 512 | 29196 | $31748[2] | N/A | N/A | $1523 | 39.79 | $4080 | 13:1 |
| 33 | 14178 | 78494 | N/A | N/A | 404 | 67.04 | 4153 | 14:1 |
| 00 | 21118 | 59913 | N/A | N/A | 325 | 41.55 | 3712 | 17:1 |
| 202 | 3839 | 45073 | N/A | N/A | 162 | 57.06 | 3529 | 14:1 |

Figures used for variables of AVPP, TIPP, and WPP in the original study were based on adjusted assessed valuation. Therefore, WPP 1988-89 and proxy 1990-91 as explained in Table 7 note 1 are not directly comparable.

See note 1 in Table 7.

SD= Unified school district
TE= Full time enrollment
WPP= Wealth per pupil
VPP= Adjusted assessed valuation per pupil
IPP= Taxable income per pupil
ITRPP= Income tax rebate per pupil
MILLS= General fund tax rate
PP= Budget per pupil
TR= Pupil/teacher ratio (Source: KASB)
N/A= Not available or not applicable

TABLE 12

COMPARISON OF USD 202
AND NEIGHBORING FIFTH ENROLLMENT DISTRICTS
AS A PERCENT
1990-91

| SD | FTE | WPP | AVPP | TIPP | ITRPP | MILLS | BPP | PTR |
|---|---|---|---|---|---|---|---|---|
| 988-89 | | | | | | | | |
| 12 | 29000 | 30% | 38% | 38% | 15% | 93% | 86% | 105% |
| 33 | 12682 | 63% | 68% | 53% | 50% | 76% | 85% | 115% |
| 00 | 22345 | 76% | 92% | 53% | 50% | 145% | 97% | 99% |
| 02 | 3800 | -- | -- | -- | -- | -- | -- | -- |
| 990-91 | | | | | | | | |
| 12 | 29196 | N/A[1] | N/A | N/A | 10.6% | 143% | 86% | 108% |
| 33 | 14178 | N/A | N/A | N/A | 40.0% | 85% | 85% | 100% |
| 00 | 21118 | N/A | N/A | N/A | 50.0% | 137% | 95% | 82% |
| 02 | 3839 | -- | -- | -- | -- | -- | -- | -- |

See note 1 in Table 7. No sensible calculation of percentage for WPP ould be made due to 1988 reliance on adjusted valuation and actual value n 1989. This was compounded by no wealth definition in 1990. The effect f these events appeared to be especially pronounced in the fifth category.

SD= Unified school district
TE= Full time enrollment
PP= Wealth per pupil
VPP= Adjusted assessed valuation per pupil
IPP= Taxable income per pupil
TRPP= Income tax rebate per pupil
ILLS= General fund tax rate
PP= Budget per pupil
TR= Pupil/teacher ratio (Source: KASB)
/A= Not available or not applicable

TABLE 13

YEAR-END CASH
1987-1991

CARRYOVER

| | 1987-88 | 1988-89 | 1989-90 | 1990-91 |
|---|---|---|---|---|
| 512 | $14749062 | $10513388 | $13460650 | N/A[1] |
| 233 | 3299243 | 3097992 | 3829714 | N/A |
| 500 | 21022780 | 20955850 | 20149268 | N/A |
| 202 | 889384 | 1198467 | 1213086 | N/A |

UNUSED BUDGET AUTHORITY

| | 1988-89 | 1989-90 | 1990-91 |
|---|---|---|---|
| 512 | $2396834 | $ 0 | $ 0 |
| 233 | 2651064 | 3620304 | 3247768 |
| 500 | 0 | 334 | 4950 |
| 202 | 0 | 0 | 0 |

TRANSFERS[2]

| | |
|---|---|
| 512 | NONE |
| 233 | NONE |
| 500 | NONE |
| 202 | NONE |

Data on cash carryover for 1990-91 could not be compared due to districts' unwillingness to provide this information and lack of state department data on tape. In USD 202, however, cash carryover will increase to 13.4% of general fund totals for 1991-92 as the district attempts to recover from a low cash balance. For 1992-93, however, cash balance is again predicted to decline sharply, dropping to only 10.3% of general fund totals for no effective longterm gain.

No data on state department tape relative to 1990-91.

CARRYOVER= Unencumbered July 1 cash from prior year.
PERCENT= Carryover as percent of general fund budget.
UNUSED AUTHORITY= Unused budget authority.
TRANSFERS= Transfer of unused funds into capital outlay.
N/A= Not available.

TABLE 14

PROFESSIONAL SALARIES
1988-89 and 1990-91

| 988-89 | | | | | |
|---|---|---|---|---|---|
| SD | TCHR | PCT* | ADM | PCT* | TURNOVER |
| 12 | $32,412 | 24% | $56,598 | 27% | 5.6% |
| 33 | 30,466 | 15% | 48,892 | 9% | 3.3% |
| 00 | 27,171 | 4% | 43,239 | -3% | 8.0% |
| 02 | 26,224 | -- | 44,689 | -- | 12.0% |
| **990-91** | | | | | |
| SD | TCHR | PCT* | ADM | PCT* | TURNOVER |
| 12 | $35,364 | 24% | $59,996 | 22% | 8.0% |
| 33 | 34,145 | 20% | 54,434 | 11% | 3.0%[1] |
| 00 | 29,998 | 5% | 45,456 | -7% | N/A[2] |
| 02 | 28,568 | -- | 49,078 | -- | 11.0% |

No 1990-91 data yet computed by the district. Prior year data shown is xpected to remain constant.

No data available from the district. Two attempts to gain this data ailed. Given little change in this variable on other districts, however, omparability for 1990-91 can be assumed.

SD= Unified school district.
CHR= Teacher salary. (Source: KASB).
CT= Percent difference between USD 202 and compared district.
DM= Administrator salary. (Source: KASB).
URNOVER= Percent teacher turn-over.
CT= Percent difference between USD 202 and compared district.

TABLE 15

URBAN COMPARATIVES
1988-89 and 1990-91

| SD | % FREE LUNCH | RANK | % MINORITY STUDENTS | RANK |
|---|---|---|---|---|
| 988-89 | | | | |
| 12 | 8.9% | 4 | 7.1% | 3 |
| 233 | 12.9% | 3 | 6.7% | 4 |
| 500 | 61.9% | 1 | 58.2% | 1 |
| 02 | 30.2% | 2 | 12.7% | 2 |
| 1990-91 | | | | |
| 12 | 12.5% | 4 | 7.2% | 4 |
| 33 | 14.7% | 3 | 7.8% | 3 |
| 500 | 65.4% | 1 | 60.1% | 1 |
| 02 | 26.5% | 2 | 14.6% | 2 |